



Lease Life
to Man-Made
Structures

SUPERSHIELD

DPC ADMIXPLUS

Self-healing Liquid Crystalline Waterproofing
Admixtures for Concrete



PRODUCT DESCRIPTION

SUPERSHIELD DPC ADMIXPLUS is a high-performance liquid crystalline admixture powered by Deep Penetrating Capillary (DPC) Crystalline Technology, designed to waterproof, protect, and enhance the durability of concrete. Once added to the mix, it reacts with moisture and cement hydration by-products to form insoluble crystalline structures that penetrate deep into pores and capillaries, becoming an integral part of the concrete matrix and creating a permanent, impermeable barrier against water and chemical ingress.

When added to the mix, it initiates a continuous crystallization process; SHIELD® Crystals grow within the concrete matrix, sealing pores and microcracks; if cracks form later due to settling or shrinkage, incoming water reactivates the crystallization process and additional crystals grow, restoring watertightness through self-healing. Specially formulated for modern concrete practices, DPC ADMIXPLUS is fully compatible with additives and supplementary cementitious materials (SCMs).

RECOMMENDED USES

- Basements
- Concrete Water Tanks
- Tunnels and Subway Systems
- Roof Slab
- Sewage and Water Treatment Plants
- Reservoirs
- Sunken Portion
- Foundations & Elevator pits
- Ground Parking Structures
- Bridges and Dams



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FEATURES AND BENEFITS

- Unique ability to become a truly integral part of the concrete matrix
- Permanent and eco-friendly with self-healing capabilities
- Unique crystallization process reactivates at any later stage in the presence of moisture and water
- Can heal hairline cracks up to 0.5 mm
- Easily dosed and no mixing required
- No risk of dust and clumping while mixing
- Enhances concrete durability and reduces concrete permeability
- Can be directly added to the RMC truck at the job site
- Does not have an adverse effect on mixed designs
- Non toxic and approved for potable water
- Allows concrete to breathe
- Enhances shrinkage resistance
- Can be dosed automatically at the batching plant
- Cost-effective and time-saving than most other methods
- Construction friendly, enhances construction scheduling flexibility



TECHNICAL DATA

General Characteristics		
PROPERTY	VALUE	
Color and Appearance	Grey Powder	
Density	1.1 g/cm ³	
pH Value	10 - 12	

Performance Characteristics		
TEST NAME	TEST METHOD	PERFORMANCE
Depth of Water penetration	EN 12390 - 8	> 74% decrease in permeability compared to control mix
Resistance to Chloride Ion	ASTM C1202	Average charge passed: 633 Coulombs » Very Low Permeability class (<1000 C).
Compressive Strength	EN 12390	At 28days : 9.6% Increase than the concrete mix
Capillary Absorption	EN 480-5	Tested for 28 days after 90 days curing: test mix ≤ 60% by mass of control mix
Air Content	EN 12350-7	Test mix ≤ 2% by volume above control mix
Chloride Ion Content	EN 480-10	≤ 0.10% by mass
Alkali Content	EN 480-12	≤ 10.3% by mass
Potable Water Test	D.Lgs. 31/2001	Complies with the parameters
Corrosion Behaviour	Contains only substances according to EN934-1 Annex A1	



APPLICATION GUIDELINES

Preparation And Mixing

Dosage: SUPERSHIELD DPC ADMIXPLUS is recommended at 1% of cement weight. Under certain conditions, the dosage may be adjusted between 1% and 2%, depending on concrete requirements.

Application

SUPERSHIELD DPC ADMIXPLUS can be introduced during batching at the plant or on-site by the ready-mix truck. It may be added to the mixing water or directly into the concrete mixer after most of the mixing water has been added, as a final ingredient. At batching plants, dosing can also be automated by integrating a pump with the existing PLC controller; for details on system integration, contact the manufacturer's representatives. The addition of DPC ADMIXPLUS to dry aggregate or cement is not recommended. To achieve optimum performance, a minimum wet mixing time of 2 minutes, depending on mixing conditions and mixer performance, is required.

LIMITATIONS

When incorporating SUPERSHIELD DPC ADMIXPLUS, the temperature of the concrete mix should be above 40°F (4°C). If frozen and/or if precipitation has occurred, SUPERSHIELD DPC ADMIXPLUS may be used after thawing slowly at room temperature and after intensive mixing.

HEALTH AND SAFETY

SUPERSHIELD DPC ADMIXPLUS contains chemicals that may cause skin irritation. Protective gloves and goggles are recommended during handling. In case of contact with the eyes, flush immediately with clean water and seek medical assistance if symptoms persist.

STORAGE

When stored in a dry place in unopened, undamaged original packaging, the shelf life is 24 months. The product must be protected from direct sunlight and frost. Always agitate the product before use. Do not allow the product to freeze. Repeated freezing and thawing may cause damage.

PACKAGING

Available in 25-litre cans, 200-litre drums, and 1000-litre bulk containers.

WARRANTY

Supershield warrants that the products manufactured by it shall be free from material defects and comply with the specifications given in their respective technical data sheets. Should any of the products be proven defective, the liability of Supershield shall be limited to the replacement of the product, and Supershield shall in no case be liable otherwise or for incidental or consequential damages. No other warranties, express or implied, shall apply, including any warranty of merchantability or fitness for a particular purpose. The user shall determine the suitability of the product for the intended use and assume all risks and liabilities in connection therewith. Supershield reserves the right to change the properties of its products without notice.